UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

MEMORANDUM

Date: 5-June-2019

SUBJECT: **Uniconazole-P** Acute and Chronic Dietary Aggregate (Food Only) Exposure Analyses for Registration Review.

PC Code: 138976
Decision No.: 544054
Petition No.: NA
Risk Assessment Type: Dietary
TXR No.: NA
MRID No.: NA

DP Barcode: D452013
Registration No.: NA
Regulatory Action: Registration Review
Case No.: 7007
CAS No.: 83657-17-4
40 CFR: §180.643

FROM: Jack Giordano, Chemist
Risk Assessment Branch II (RAB2)
Health Effects Division (HED, 7509P)

THROUGH: Douglas Dotson, Ph.D., Chemist
David Nadrchal, Chemist

TO: Samantha Thomas, Chemical Review Manager
Melanie Biscoe, Team Leader
Risk Management and Implementation Branch V (RMIBV)
Pesticide Re-evaluation Division (PRD, 7508P)

Executive Summary

Acute and chronic aggregate dietary (food only) exposure and risk assessments were conducted using the Dietary Exposure Evaluation Model software with the Food Commodity Intake Database (DEEM-FCID) Version 3.16. This software uses 2003-2008 food consumption data from the U.S. Department of Agriculture's (USDA's) National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). The analyses were conducted in support of the registration review risk assessment. This memorandum was reviewed by two peer reviewers of the DESAC, per the DESAC Standard Operating Procedure (SOP; 30-Mar-2016).

Uniconazole-P is registered for use in commercial greenhouses on fruiting vegetable transplants. The use pattern for registration review only supports indoor application. As a result, uniconazole-P residues are not expected in ground and surface water sources of drinking water.

Acute Dietary (Food Only) Exposure Assessment

HED performed an unrefined acute dietary exposure assessment. The analysis utilized tolerance level residue estimates and assumed 100% crop treated. HED previously included estimated drinking water concentrations in the acute dietary exposure assessment. The acute dietary risk estimates for the general U.S. population and all population subgroups at the 95th percentile of exposure were <1% of the acute population adjusted dose (aPAD). The dietary risk estimates are below HED's level of concern.

Chronic Dietary (Food Only) Exposure Assessment

HED performed an unrefined chronic dietary exposure assessment. The analysis utilized tolerance level residue estimates and assumed 100% crop treated. HED previously included estimated drinking water concentrations in the chronic dietary exposure assessment. The general U.S. population and all population subgroups utilize <1% of the chronic population adjusted dose (cPAD). The chronic dietary risk estimates are below HED's level of concern.

Cancer Dietary Exposure Assessment

Uniconazole-P was classified by the HED Carcinogenicity Peer Review Committee (CPRC) as a Group C, possible human carcinogen. The CPRC recommended the reference dose (RfD) approach for risk assessment, and concluded that the chronic RfD would be protective of all chronic effects including carcinogenicity. As a result, the chronic dietary exposure analysis is adequate to assess cancer risk. All adult population subgroups utilize <1% of the cPAD.

Common Triazole Metabolites

HED identified the common triazole metabolites 1,2,4-triazole, triazole alanine, and triazole acetic acid as residues of concern for risk assessment for uniconazole-P. HED performed separate dietary exposure assessments for these metabolites that account for contribution from uniconazole-P (D448161; T. Morton; 08-Aug-2008). As a result, the common triazole metabolites are not addressed in this assessment.

I. Introduction

Dietary risk assessment incorporates both exposure and toxicity of a given pesticide. For acute and chronic assessments, the risk is expressed as a percentage of a maximum acceptable dose (i.e., the dose that HED has concluded will result in no unreasonable adverse health effects). This dose is referred to as the population-adjusted dose (PAD). The PAD is equivalent to the point of departure (POD) divided by all applicable uncertainty factors, including the FQPA Safety Factor (SF).

For acute and non-cancer chronic exposures, HED is concerned when estimated dietary risk exceeds 100% of the PAD. References that discuss the acute and chronic risk assessments in more detail are available on the EPA/pesticides web site: "Available Information on Assessing Exposure from Pesticides, A User's Guide," 21-JUN-2000, web link: https://www.regulations.gov/document?D=EPA-HQ-OPP-2007-0780-0001; or see SOP 99.6 (20-AUG-1999).

The most recent dietary risk assessment for uniconazole-P was conducted by Douglas Dotson (D348937; 31-Mar-2008).

II. Residue Information

For the registration review of uniconazole-P, HED is recommending that the Vegetable, fruiting, group 8 tolerance of 0.01 ppm be removed and replaced with a tolerance of 0.01 ppm for Vegetable, fruiting, group 8-10. These dietary exposure analyses use tolerance level residue estimates for all crops within the updated crop group. Tolerance information for uniconazole-P can be found under 40 CFR §180.643.

A tomato processing study was not submitted due to nondetectable residues in the crop field trials at 2x maximum application rate and the minimal likelihood that plants treated with a growth inhibitor would end up in the processing market. The tolerance is adequate to cover concentration in tomato paste and tomato puree. For all other processed commodities, HED used the following 2018 default processing factors: dried tomato (14.3x), dried bell pepper (13.5x), and dried nonbell pepper (12.8x).

The residues of concern for risk assessment are parent uniconazole-P, its R-enantiomer, and its Z-isomer. The established tolerance accounts for parent uniconazole-P as well as the R-enantiomer and the Z-isomer.

The common triazole metabolites 1,2,4-triazole, triazole alanine, and triazole acetic acid have also been identified as residues of concern for risk assessment for uniconazole-P. HED performed separate dietary exposure assessments for the common triazole metabolites (D448161; T. Morton; 08-Aug-2018). The dietary exposure analyses for the common triazole metabolites are adequate to cover the use of uniconazole-P on fruiting vegetable bedding plants for several reasons. First, the triazole fungicide myclobutanil may be used on tomatoes at a rate of 0.50 pounds of active ingredient per acre (lb ai/acre) and on peppers and other members of crop group 8 at a rate of 0.125 lb ai/acre. The molecular weights (MWs) of myclobutanil and uniconazole are very comparable (myclobutanil MW=289 grams/mole and uniconazole MW=291 grams/mole). The equivalent application rates of uniconazole-P would be 0.50 and 0.126 lb ai/acre on tomatoes and peppers, respectively. However, the application rate of uniconazole-P to fruiting vegetables is only 0.018 lb ai/acre. The myclobutanil application rates are therefore 28x and 7x the uniconazole-P application rates to tomatoes and peppers, respectively. Second, uniconazole-P is registered as an early season application to bedding plants prior to fruit being present. Finally, uniconazole-P is registered for greenhouse use on bedding plants that are primarily intended for homeowner use. Although plants treated with uniconazole-P may be used for commercial fruiting vegetable production, that is not the intended use. For these reasons,

residues of the triazole metabolites will be much lower from the greenhouse use of uniconazole-P than they are from the field application of myclobutanil and, as stated above, the dietary exposure analyses for the triazole metabolites are adequate to cover the use of uniconazole-P on fruiting vegetable bedding plants.

Residues in Fish

The USDA Pesticide Data Program (PDP) monitored pesticide residues in catfish in 2008, 2009, and 2010 and salmon in 2013 and 2014. In general, pesticide residues would not be expected to be found in fish unless the pesticide bioaccumulates or has an aquatic use. To determine whether or not residues are present in fish, HED now routinely checks PDP monitoring data regardless of the pesticide's uses and physicochemical properties. However, PDP did not analyze fish samples for uniconazole-P. As a result, residues in fish were not included in the assessment.

III. Percent Crop Treated Information

HED assumed 100% crop treated for all commodities in the acute and chronic assessments.

IV. DEEM-FCID Program and Consumption Information

Uniconazole-P acute and chronic dietary exposure assessments were conducted using the DEEM-FCID, Version 3.16, which incorporates 2003-2008 consumption data from USDA's NHANES/WWEIA. The data are based on the reported consumption of more than 20,000 individuals over two non-consecutive survey days. Foods "as consumed" (e.g., apple pie) are linked to EPA-defined food commodities (e.g., apples, peeled fruit - cooked; fresh or N/S; baked; or wheat flour - cooked; fresh or N/S, baked) using publicly available recipe translation files developed jointly by USDA/ARS and EPA. For chronic exposure assessment, consumption data are averaged for the entire U.S. population and within population subgroups. However, for acute exposure assessment, consumption data are retained as individual consumption events. Based on analysis of the 2003-2008 WWEIA consumption data, which took into account dietary patterns and survey respondents, HED concluded that it is most appropriate to report risk for the following population subgroups: the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, adults 20-49, females 13-49, and adults 50-99 years old.

For a chronic dietary exposure assessment, an estimate of the residue level in each food or food-form (e.g., orange or orange juice) on the food-commodity residue list is multiplied by the average daily consumption estimate for that food/food form to produce a residue intake estimate. The resulting residue intake estimate for each food/food form is summed with the residue intake estimates for all other food/food forms on the commodity residue list to arrive at the total average estimated exposure. Exposure is expressed in mg/kg body weight/day and as a percent of the cPAD. This procedure is performed for each population subgroup.

For an acute exposure assessment, individual one-day food consumption data are used on an individual-by-individual basis. The reported consumption amounts of each food item can be multiplied by a residue point estimate and summed to obtain a total daily pesticide exposure for a

deterministic exposure assessment, or "matched" in multiple random pairings with residue values and then summed in a probabilistic assessment. The resulting distribution of exposures is expressed as a percentage of the aPAD on both a user (i.e., only those who reported eating relevant commodities/food forms) and a per-capita (i.e., those who reported eating the relevant commodities as well as those who did not) basis. In accordance with HED policy, per capita exposure and risk are reported for analyses performed at all levels of refinement. However, for deterministic assessments, any significant differences in user vs. per capita exposure and risk are specifically identified and noted in the risk assessment.

V. Toxicological Information

HED selected separate toxicological acute endpoints for the general population and for the females 13-49 population subgroup. For the general population, the POD is based on decreased spontaneous activity and urinary incontinence observed in the acute lethality study. For the females 13-49 population subgroup, the POD is based on developmental and maternal toxicity based on increased incidence of 14th rib in fetuses and decreased body weight in dams.

The POD chosen for the chronic dietary exposure analysis is based on liver effects including organ weight, enzyme changes, and supportive histopatho1ogical findings observed in the dog chronic oral study.

HED recommended that the 10x FQPA SF be reduced to 1x based on: 1) the lack of increased pre- and post-natal susceptibility in developmental and reproduction studies, 2) the lack of evidence of frank neurotoxicity in the database; all clinical signs that could be related to a neurotoxic effect were seen at high doses above those that caused liver toxicity, and a developmental neurotoxicity study was not required, and 3) the conservative tolerance-level residue estimates that overestimate exposure.

Table 1. Summary of Toxicological Doses and Endpoints for Uniconazole-P for Use in Dietary Exposure Assessments.

Exposure/ Scenario	Point of Departure	Uncertainty/FQPA Safety Factors	RfD / PAD	Study and Toxicological Effects
Acute Dietary (Females 13-49 years of age)	NOAEL = 5 mg/kg/day	UF_A= 10x UF_H=10x FQPA SF= 1x	Acute RfD = 0.05 mg/kg/day aPAD = 0.05 mg/kg/day	Prenatal Developmental Toxicity - rat LOAEL = 25 mg/kg/day based on increased incidence of 14th rib.
Acute Dietary (General Population)	NOAEL = 100 mg/kg/day	UF_A= 10x UF_H=10x FQPA SF= 1x	Acute RfD = 1 mg/kg/day aPAD = 1 mg/kg/day	Acute Oral Toxicity- rat LOAEL = 200 mg/kg/day based on decreased spontaneous activity and urinary incontinence.
Chronic Dietary (All Populations)	NOAEL= 2 mg/kg/day	UF_A= 10x UF_H= 10x FQPA SF= 1x	Chronic RfD = 0.02 mg/kg/day cPAD = 0.02 mg/kg/day	Chronic Oral (Capsule) Toxicity - dog LOAEL = 20 mg/kg/day based on the increased absolute and relative liver weight changes in males supported by histological and enzyme changes in the liver.

Table 1. Summary of Toxicological Doses and Endpoints for Uniconazole-P for Use in Dietary Exposure Assessments.				
Exposure/ Scenario	**Point of Departure**	**Uncertainty/FQPA Safety Factors**	**RfD / PAD**	**Study and Toxicological Effects**
Cancer	Uniconazole-P was classified by the HED CPRC as a Group C, possible human carcinogen. The CPRC recommended the RfD approach for risk assessment and concluded that the chronic RfD would be protective of all chronic effects including carcinogenicity.			

Point of Departure (POD) = A data point or an estimated point that is derived from observed dose-response data and used to mark the beginning of extrapolation to determine risk associated with lower environmentally relevant human exposures. NOAEL = no observed adverse effect level. LOAEL = lowest observed adverse effect level. UF = uncertainty factor. UF_A = extrapolation from animal to human (interspecies). UF_H = potential variation in sensitivity among members of the human population (intraspecies). FQPA SF = FQPA Safety Factor. PAD = population adjusted dose (a = acute, c = chronic). RfD = reference dose. MOE = margin of exposure. LOC = level of concern.

VI. Results/Discussion

As stated above, for acute and chronic assessments, HED is concerned when dietary risk estimates exceed 100% of the PAD. The DEEM-FCID analyses estimate the dietary exposure and risk of the general U.S. population and various population subgroups. The results reported in Table 2 are for the general U.S. population, all infants (<1 year old), children 1-2, children 3-5, children 6-12, youth 13-19, females 13-49, adults 20-49, and adults 50-99 years.

Results of Acute Dietary (Food Only) Exposure and Risk Assessment

The results of the acute dietary exposure analysis are reported in Table 2, below. The general U.S. population and all population subgroups utilize <1% of the aPAD. The acute dietary risk estimates are below HED's level of concern.

Results of Chronic Dietary (Food Only) Exposure and Risk Assessment

The results of the chronic dietary exposure analysis are reported in Table 2, below. The general U.S. population and all population subgroups utilize <1% of the cPAD. The chronic dietary risk estimates are below HED's level of concern.

Results of Cancer Dietary (Food Only) Exposure and Risk Assessment

Uniconazole-P was classified by the HED CPRC as a Group C, possible human carcinogen. The CPRC recommended the RfD approach for risk assessment and concluded that the chronic RfD would be protective of all chronic effects including carcinogenicity. As a result, the chronic dietary exposure analysis is adequate to assess cancer risk. All adult population subgroups utilize <1% of the cPAD.

Table 2. Summary of Dietary (Food Only) Exposure and Risk for Uniconazole-P.					
Population Subgroup	Acute Dietary (95th Percentile)			Chronic Dietary	
	aPAD (mg/kg/day)	Dietary Exposure (mg/kg/day)	% aPAD	Dietary Exposure (mg/kg/day)	% cPAD
General U.S. Population	1	0.000035	<1	0.000009	<1
All Infants (<1 year old)	1	0.000028	<1	0.000004	<1
Children 1-2 years old	1	0.000069	<1	0.000016	<1
Children 3-5 years old	1	0.000067	<1	0.000017	<1
Children 6-12 years old	1	0.000045	<1	0.000011	<1
Youth 13-19 years old	1	0.000029	<1	0.000008	<1
Adults 20-49 years old	1	0.000031	<1	0.000009	<1
Adults 50-99 years old	1	0.000030	<1	0.000008	<1
Females 13-49 years old	0.05	0.000056	<1	0.000008	<1

VII. Characterization of Inputs/Outputs

HED used conservative values for food residue levels, percent crop treated estimates, and processing factors. Further refinements could be made to the analysis, but they are not necessary at the present time.

VIII. Conclusions

Acute and chronic dietary risk assessments were performed for uniconazole-P based on conservative assumptions that overestimate exposure and risk. The acute dietary risk estimates for the general U.S. population and all population subgroups are below HED's level of concern. The chronic dietary risk estimates for the general U.S. population and all population subgroups are also below HED's level of concern. The chronic dietary exposure analysis is protective of cancer effects. Previous risk assessments performed for the triazole metabolites are protective of any dietary risk that might result from exposure to these compounds through the greenhouse use of uniconazole-P on fruiting vegetables. HED is confident that the assessment does not underestimate risk to the general U.S. population or any population subgroup.

IX. List of Attachments

Attachment 1: Residue Input File for Acute Analysis: Females 13-49 Years Old
Attachment 2: Results of Acute Dietary Exposure Analysis: Females 13-49 Years Old
Attachment 3: Residue Input File for Acute Analysis: General Population
Attachment 4: Results of Acute Dietary Exposure Analysis: General Population
Attachment 5: Residue Input File for Chronic Analysis
Attachment 6: Results of Chronic Dietary Exposure Analysis

Attachment 1: Residue Input File for Acute Analysis: Females 13-49 Years Old

```
Filename: C:\Users\jgiordan\OneDrive - Environmental Protection Agency (EPA)\EZ Records -
Private\Uniconazole\ezD841898_Acute Female 13-49.r08
Chemical: Uniconazole-P
RfD(Chronic): .02 mg/kg bw/day  NOEL(Chronic): 2 mg/kg bw/day
RfD(Acute): .05 mg/kg bw/day  NOEL(Acute):  5 mg/kg bw/day
Date created/last modified: 05-07-2019/14:03:55       Program ver. 3.16, 03-08-d
```

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	#2	Comment
0801374000	8A	Tomatillo	0.010000	1.000	1.000	
0801375000	8A	Tomato	0.010000	1.000	1.000	
0801375001	8A	Tomato-babyfood	0.010000	1.000	1.000	
0801376000	8A	Tomato, paste	0.010000	1.000	1.000	
0801376001	8A	Tomato, paste-babyfood	0.010000	1.000	1.000	
0801377000	8A	Tomato, puree	0.010000	1.000	1.000	
0801377001	8A	Tomato, puree-babyfood	0.010000	1.000	1.000	
0801378000	8A	Tomato, dried	0.010000	14.300	1.000	
0801378001	8A	Tomato, dried-babyfood	0.010000	14.300	1.000	
0801379000	8A	Tomato, juice	0.010000	1.000	1.000	
0801380000	8A	Tomato, Tree	0.010000	1.000	1.000	
0802148000	8BC	Eggplant	0.010000	1.000	1.000	
0802234000	8BC	Okra	0.010000	1.000	1.000	
0802270000	8B	Pepper, bell	0.010000	1.000	1.000	
0802270001	8B	Pepper, bell-babyfood	0.010000	1.000	1.000	
0802271000	8B	Pepper, bell, dried	0.010000	13.500	1.000	
0802271001	8B	Pepper, bell, dried-babyfood	0.010000	13.500	1.000	
0802272000	8BC	Pepper, nonbell	0.010000	1.000	1.000	
0802272001	8BC	Pepper, nonbell-babyfood	0.010000	1.000	1.000	
0802273000	8BC	Pepper, nonbell, dried	0.010000	12.800	1.000	
1100173500	11	Goji berry	0.010000	1.000	1.000	

Attachment 2: Results of Acute Dietary Exposure Analysis: Females 13-49 Years Old

```
US EPA                                                        Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for UNICONAZOLE-P                NHANES 2003-2008 2-Day
Residue file: ezD841898_Acute Female 13-49.r08    Adjustment factor #2 NOT used.
Analysis Date: 05-07-2019/14:06:03    Residue file dated: 05-07-2019/14:03:55
NOEL (Acute) =   5.000000 mg/kg body-wt/day
RAC/FF intake summed over 24 hours
Run Comment: ""
================================================================================

Summary calculations--per capita:

---   95th Percentile----   ---   99th Percentile----     ---99.9th Percentile----
 Exposure  % aRfD     MOE    Exposure  % aRfD     MOE    Exposure  % aRfD     MOE
---------- ------- -------- ---------- ------- -------- ---------- ------- --------
Female 13-49:
  0.000030    0.06  166100    0.000056    0.11   89085    0.000107    0.21   46862
```

Attachment 3: Residue Input File for Acute Analysis: General Population

```
Filename: C:\Users\jgiordan\OneDrive - Environmental Protection Agency (EPA)\EZ Records -
Private\Uniconazole\ezD841899_Acute Gen Pop.r08
Chemical: Uniconazole-P
RfD(Chronic): .02 mg/kg bw/day  NOEL(Chronic): 2 mg/kg bw/day
RfD(Acute): 1 mg/kg bw/day  NOEL(Acute):  100 mg/kg bw/day
Date created/last modified: 05-07-2019/14:04:14       Program ver. 3.16, 03-08-d
```

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	#2	Comment
0801374000	8A	Tomatillo	0.010000	1.000	1.000	
0801375000	8A	Tomato	0.010000	1.000	1.000	
0801375001	8A	Tomato-babyfood	0.010000	1.000	1.000	
0801376000	8A	Tomato, paste	0.010000	1.000	1.000	
0801376001	8A	Tomato, paste-babyfood	0.010000	1.000	1.000	
0801377000	8A	Tomato, puree	0.010000	1.000	1.000	
0801377001	8A	Tomato, puree-babyfood	0.010000	1.000	1.000	
0801378000	8A	Tomato, dried	0.010000	14.300	1.000	
0801378001	8A	Tomato, dried-babyfood	0.010000	14.300	1.000	
0801379000	8A	Tomato, juice	0.010000	1.000	1.000	
0801380000	8A	Tomato, Tree	0.010000	1.000	1.000	
0802148000	8BC	Eggplant	0.010000	1.000	1.000	
0802234000	8BC	Okra	0.010000	1.000	1.000	
0802270000	8B	Pepper, bell	0.010000	1.000	1.000	
0802270001	8B	Pepper, bell-babyfood	0.010000	1.000	1.000	
0802271000	8B	Pepper, bell, dried	0.010000	13.500	1.000	
0802271001	8B	Pepper, bell, dried-babyfood	0.010000	13.500	1.000	
0802272000	8BC	Pepper, nonbell	0.010000	1.000	1.000	
0802272001	8BC	Pepper, nonbell-babyfood	0.010000	1.000	1.000	
0802273000	8BC	Pepper, nonbell, dried	0.010000	12.800	1.000	
1100173500	11	Goji berry	0.010000	1.000	1.000	

Attachment 4: Results of Acute Dietary Exposure Analysis: General Population

```
US EPA                                                          Ver. 3.18, 03-08-d
DEEM-FCID ACUTE Analysis for UNICONAZOLE-P                NHANES 2003-2008 2-Day
Residue file: ezD841899_Acute Gen Pop.r08          Adjustment factor #2 NOT used.
Analysis Date: 05-07-2019/14:13:21    Residue file dated: 05-07-2019/14:04:14
NOEL (Acute) = 100.000000 mg/kg body-wt/day
RAC/FF intake summed over 24 hours
Run Comment: ""
================================================================================

Summary calculations--per capita:

---   95th Percentile----   ---   99th Percentile----     ---99.9th Percentile----
 Exposure  % aRfD     MOE    Exposure  % aRfD     MOE    Exposure  % aRfD     MOE
---------- ------- -------- ---------- ------- -------- ---------- ------- --------
Total US Population:
  0.000035    0.00>1000000    0.000067    0.01>1000000    0.000142    0.01  702487
All Infants:
  0.000028    0.00>1000000    0.000074    0.01>1000000    0.000176    0.02  568099
Children 1-2:
  0.000069    0.01>1000000    0.000115    0.01  870750    0.000219    0.02  456447
Children 3-5:
  0.000067    0.01>1000000    0.000150    0.01  667696    0.000241    0.02  415279
Children 6-12:
  0.000045    0.00>1000000    0.000083    0.01>1000000    0.000130    0.01  771520
Youth 13-19:
  0.000029    0.00>1000000    0.000060    0.01>1000000    0.000146    0.01  685804
Adults 20-49:
  0.000031    0.00>1000000    0.000057    0.01>1000000    0.000112    0.01  890781
Adults 50-99:
  0.000030    0.00>1000000    0.000055    0.01>1000000    0.000117    0.01  857081
```

Attachment 5: Residue Input File for Chronic Analysis

```
ilename: C:\Users\jgiordan\OneDrive - Environmental Protection Agency (EPA)\EZ Records -
Private\Uniconazole\ezD841900_Chronic All Pop.r08
Chemical: Uniconazole-P
RfD(Chronic): .02 mg/kg bw/day  NOEL(Chronic): 2 mg/kg bw/day
RfD(Acute): .05 mg/kg bw/day  NOEL(Acute):  5 mg/kg bw/day
Date created/last modified: 05-07-2019/14:04:38       Program ver. 3.16, 03-08-d
```

EPA Code	Crop Grp	Commodity Name	Def Res (ppm)	Adj.Factors #1	#2	Comment
0801374000	8A	Tomatillo	0.010000	1.000	1.000	
0801375000	8A	Tomato	0.010000	1.000	1.000	
0801375001	8A	Tomato-babyfood	0.010000	1.000	1.000	
0801376000	8A	Tomato, paste	0.010000	1.000	1.000	
0801376001	8A	Tomato, paste-babyfood	0.010000	1.000	1.000	
0801377000	8A	Tomato, puree	0.010000	1.000	1.000	
0801377001	8A	Tomato, puree-babyfood	0.010000	1.000	1.000	
0801378000	8A	Tomato, dried	0.010000	14.300	1.000	
0801378001	8A	Tomato, dried-babyfood	0.010000	14.300	1.000	
0801379000	8A	Tomato, juice	0.010000	1.000	1.000	
0801380000	8A	Tomato, Tree	0.010000	1.000	1.000	
0802148000	8BC	Eggplant	0.010000	1.000	1.000	
0802234000	8BC	Okra	0.010000	1.000	1.000	
0802270000	8B	Pepper, bell	0.010000	1.000	1.000	
0802270001	8B	Pepper, bell-babyfood	0.010000	1.000	1.000	
0802271000	8B	Pepper, bell, dried	0.010000	13.500	1.000	
0802271001	8B	Pepper, bell, dried-babyfood	0.010000	13.500	1.000	
0802272000	8BC	Pepper, nonbell	0.010000	1.000	1.000	
0802272001	8BC	Pepper, nonbell-babyfood	0.010000	1.000	1.000	
0802273000	8BC	Pepper, nonbell, dried	0.010000	12.800	1.000	
1100173500	11	Goji berry	0.010000	1.000	1.000	

Attachment 6: Results of Chronic Dietary Exposure Analysis

```
US EPA                                                          Ver. 3.16, 03-08-d
DEEM-FCID Chronic analysis for UNICONAZOLE-P                NHANES 2003-2008 2-day
Residue file name: C:\Users\jgiordan\OneDrive - Environmental Protection Agency (EPA)\EZ
Records - Private\Uniconazole\ezD841900_Chronic All Pop.r08
                                                 Adjustment factor #2 NOT used.
Analysis Date 05-07-2019/14:14:20     Residue file dated: 05-07-2019/14:04:38
Reference dose (RfD, Chronic) = .02 mg/kg bw/day
================================================================================
                    Total exposure by population subgroup
--------------------------------------------------------------------------------
```

Population Subgroup	Total Exposure mg/kg body wt/day	Total Exposure Percent of Rfd
Total US Population	0.000009	0.0%
Hispanic	0.000012	0.1%
Non-Hisp-White	0.000009	0.0%
Non-Hisp-Black	0.000007	0.0%
Non-Hisp-Other	0.000008	0.0%
Nursing Infants	0.000002	0.0%
Non-Nursing Infants	0.000005	0.0%
Female 13+ PREG	0.000008	0.0%
Children 1-6	0.000017	0.1%
Children 7-12	0.000011	0.1%
Male 13-19	0.000009	0.0%
Female 13-19/NP	0.000007	0.0%
Male 20+	0.000009	0.0%
Female 20+/NP	0.000008	0.0%
Seniors 55+	0.000008	0.0%
All Infants	0.000004	0.0%
Female 13-50	0.000008	0.0%
Children 1-2	0.000016	0.1%
Children 3-5	0.000017	0.1%
Children 6-12	0.000011	0.1%
Youth 13-19	0.000008	0.0%
Adults 20-49	0.000009	0.0%
Adults 50-99	0.000008	0.0%
Female 13-49	0.000008	0.0%

```
--------------------------------------------------------------------------------
```